

Amendment
Serial No. 10/055,388

Docket No. NL010029

REMARKS

The Office Action mailed December 9, 2005 has been reviewed and carefully considered. Claims 16-23 are added. Claims 3-9 and 11-23 are pending, the independent claims remaining 3, 7, 8 and 12. Claims 13-15 are amended as to correct dependency in the immediately apparent manner. Claim 8 is amended. No other claims are amended. Reconsideration of the above-identified application, as amended and in view of the following remarks, is respectfully requested.

Claims 13-15 are objected to for incorrect dependencies, which have now been corrected in a manner immediately apparent from the previous Office Action reply which added these claims.

Claims 3, 11 and 12 stand rejected under 35 U.S.C. 103(a) as unpatentable over Vishakhadatta in view of U.S. Patent Publication No. 2002/0039039 to Maligeorgos.

As the Office Action acknowledges, Vishakhadatta fails to disclose or suggest differential implementation of the quadrature paths.

The Office Action suggests that Maligeorgos makes up the difference. The instant applicants traverse this suggestion by the Office Action.

Vishakhadatta discloses that its LNA circuitry 824 may be replaced with other LNA circuitry for utilization "together with a poly-phase filter circuitry" to produce "in-phase and quadrature outputs" ([0079]).

To provide in-phase and quadrature outputs, the Office Action seemingly suggests an alternative replacement of the circuitry 824 with the Maligeorgos frequency multiplier circuit 10. The motivation for using a circuit designed for frequency multiplication is unclear, at least since the Office Action offers, in the way of motivation,

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only that one signal is distinguished from another. It is noted, in addition, that the Maligeorgos circuit the Office Action considers is designed for output frequencies of "10-14 GHz or higher" ([0006], [0035]).

Also, the receiver front end the Office Action proposes would not be configured for down-converting the received signal (see Maligeorgos, [0003], last sentence).

By contrast, the present claim 3 recites, "A high frequency receiver (1), which is provided with a front end comprising a low noise amplifier (2), and which is provided with quadrature mixers (3) coupled to the low noise amplifier. . ."

The Office Action cites to the Vishakhadatta down-converting circuitry 409 as embodying the "quadrature mixers" of claim 3, but, as mentioned above, the embodiment the Office Action proposes would not feature a receiver front end with down-converting circuitry.

For at least all of the above reasons, the combination of references the Office Action proposes would not have been obvious.

Claim 3 is accordingly deemed to distinguish patentably over the combination.

Reconsideration and withdrawal of the rejection is respectfully requested.

Claim 12 likewise refers to the quadrature LNA and the coupling to the quadrature mixers. Claim 12 is accordingly likewise deemed to be patentable over the applied references for at least the same reasons set forth above with regard to claim 3.

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Claims 4 and 13 stand rejected under 35 U.S.C. 103(a) as unpatentable over Vishakhadatta in view of Maligeorgos and U.S. Patent No. 5,546,048 to Sano et al. ("Sano").

Claims 4 and 13 depend from claim 3. As discussed above with respect to claim 3, Maligeorgos cannot make up for the shortcomings of the primary reference. Nor can Sano, at least because Sano fails to disclose or suggest quadrature paths being implemented differentially. Reconsideration and withdrawal of the rejection is respectfully requested.

Claims 5, 7 and 14 stand rejected under 35 U.S.C. 103(a) as unpatentable over Vishakhadatta in view of U.S. Patent No. 6,509,799 to Franca-Neto.

Claim 7 recites, ". . . across the cascode arrangement of semiconductors (15) there is connected a capacitor (C)."

Although Franca-Neto discloses a cascode arrangement of transistors 20, 22 in FIG. 2 (col. 4, lines 21-23), the reference fails to disclose or suggest a capacitor "across" the arrangement.

The Office Action suggests that Franca-Neto capacitor 52 is across the "cascode arrangement of semiconductors," but one of ordinary skill in the art would have understood what is meant by the phrase ". . . across the cascode arrangement . . . there is connected a capacitor . . ."

For at least this reason, the combination the Office Action proposes fails to render obvious the present invention as recited in claim 7. Reconsideration and withdrawal of the rejection is respectfully requested.

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Claims 5 and 14 depend from claim 3, and Franca-Neto cannot make up for the deficiencies in the primary reference. For at least this reason, claims 5 and 14 distinguish patentably over the cited references.

Claims 6 and 15 stand rejected under 35 U.S.C. 103(a) as unpatentable over Vishakhadatta in view of Franca-Neto and Japanese Patent Publication No. 57-073974 to Saigo et al. ("Saigo").

Claims 6 and 15 depend from claim 5. Saigo cannot make up for the shortcomings of the other applied references.

Reconsideration and withdrawal of the rejection is respectfully requested.

Claim 8 stands rejected under 35 U.S.C. 103(a) as unpatentable over Vishakhadatta in view of U.S. Patent No. 6,904,538 to Glas et al. ("Glas").

Support for the amendment of claim 8 is found in FIG. 1 and accompanying text in the specification.

As the Office Action acknowledges, the primary reference fails to disclose or suggest the language particular to claim 8.

The Office Action suggests that Glas makes up for the difference.

The Office Action suggests that the primary reference discloses an RF receiver with front-end LNA circuitry using a poly-phase filter to render in-phase and quadrature outputs. These outputs presumably are designed to yield a baseband signal (FIG. 8, ref. no. 120).

Glas, however, relates to an FM detector.

Moreover, the Office Action is incorrect in deeming limiters 201, 202 to be "choppers."

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To the best understanding of the applicants, the Office Action appears to be suggesting a combination that is not "A high-frequency receiver" which language explicitly appears in claim 8.

The Office Action suggests that the manner in which it envisions combination is "notoriously old."

Proper official notice would require that its assertion be explicitly stated.

The applicants traverse the statement by the Office Action; Glas makes no mention of an amplifier.

Moreover, even proper official notice on the statement by the Office Action would fail to come within the subject matter of claim 8, which recites "A high-frequency receiver."

It is accordingly unclear in what manner, and by what motivation, the Office Action proposes to combine references.

Reconsideration and withdrawal of the rejection is respectfully requested.

Claim 9 stands rejected under 35 U.S.C. 103(a) as unpatentable over Vishakhadatta in view of U.S. Patent No. 2,730,699 to Gratian.

Claim 9 depends from claim 8, and Gratian cannot make up for the shortcomings of the primary reference. For at least this reason, claim 9 distinguishes patentably over the cited references.

New claims 16 and 18 find support at least in FIG. 1.

New claims 17 and 19 find support at least in [0005], [0022].

New claim 20 finds support at least in FIG. 3

New claim 21 finds support at least in [0024].

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New claims 22 and 23 find support at least in [0023].

For all the foregoing reasons, it is respectfully submitted that all the present claims are patentable in view of the cited references. A Notice of Allowance is respectfully requested.

Respectfully submitted,

Aaron Waxler
Registration No. 48,027

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By: Steve Cha
Attorney for Applicant
Registration No. 44,069

Mail all correspondence to:
Aaron Waxler, Registration No. 48,027
US PHILIPS CORPORATION
P.O. Box 3001
Briarcliff Manor, NY 10510-8001
Phone: (914) 333-9608
Fax: (914) 332-0615